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MARKETABLE CALIFORNIA DECORATIVE GREENS

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Chaparral is the common name for the many small trees and shrubs of our California plains and mountains, including the "greens"—the florists's word for chaparral. Using the name chaparral has long been the easy way of naming the various trees and shrubs of the hills and plains and the means of satisfying many an idle inquiry as to "what is this and what is that." The word "greens" conveys little more meaning to the person not connected with the florist trade than the word "chaparral." To the florist trade it conveys the thought of many plants that are used as background and filler material for set pieces and bouquets. Many of these greens are native while a few are of exotic origin. Consequently it may be enlightening to some and of profit to others to learn of the chaparrals that the florists use as greens.

The owners of these native greens frequently under-estimate their value as a crop, which, if properly handled, is a paying one. It is needless to say that the market cannot absorb all of the native greens that exist, but it can utilize a small part of the best. However, the population of California is becoming increasingly urban each year, so that the demand for the native greens may be expected to increase; furthermore, with lower freight rates, probably a market could be developed in other states.

ONLY THE BEST MATERIALS SALABLE

Select only the best materials, leaving the yellow, broken leaves and immature growth out of the pack, as it is only the fresh green foliage and plump, well-developed berries that look well after shipping. There are dealers in the larger cities who can market to greater

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Fig. 1.—A. Soft fern or wood fern, *Dryopteris rigida arguta*, as prepared by the wholesaler.
B. Hard fern or sword fern, *Polystichum munitum*, as prepared by the wholesaler.

advantage than the individual, and as the market is limited, it is advisable for the producers to get in touch with these firms rather than ship direct to the flower market. A market can also be established in the small cities and towns through the local florists. For the sale of Christmas greens, one should begin to look for a market in October, as the florist will be able to use some of the material for Thanksgiving, the greater amount being in demand from December 7 to December 24. There is a limited market for certain greens throughout the year.

PACKING

In general, Christmas berries are packed in wooden boxes, mistletoe in paper boxes and ferns, huckleberry, cherry and salal in bales. For the last four, tanbark oak or large huckleberry sprays may be used as an outside wrapper. The bales are generally shipped by freight, with as light a wrapping as feasible. Selected packs of fine sprays of well-berried mistletoe or well-made wreaths of silver tipped redwood, with a small number of redwood cones, frequently find a ready sale in the best florist establishments.

SOFT FERN OR WOOD FERN, *Dryopteris rigida arguta*

The soft fern or wood fern, as *Dryopteris* is variously called, is used by florists in set pieces as backgrounds for other material almost universally throughout the country. The demand is rather limited but comparatively constant. In some sections of the United States it is claimed to be disappearing because of a worm that is attacking it. This worm has not been reported in this state. In the southern part of the United States, great quantities of wood fern are put into cold storage each year for use in the spring months. These ferns grow in the semi-moist places throughout the wooded areas of California and attain their greatest size in the coast mountains. They are also found throughout the middle altitudes of the Sierras, and because of their hardiness make especially fine ornamental plants. The collector cuts entire fronds measuring from 18 to 28 inches in length. The usable tip-end portions are frequently 12 to 20 inches long.

Packing.—The fronds are packed by laying each partially across the other, never one exactly on top of the other. A typical bunch of soft ferns contains 30 long fronds and 22 short frond tips, 12 to 20 inches in length. The pack might be started by using two entire fronds laying with the tips out and at a slight angle to each other, and then another entire frond placed between the two, continuing the pack by

alternating the layers—that is, two flat and a third between, but in the meantime keeping the stems quite close together and the tips spreading out in a fan shape, so that the entire pack will lay as flat as possible and tie with a soft binding cord. These small bunches are placed in a bale with the butt ends out, so as to preserve the tender tips. Coarser

Fig. 2.—Woodwardia or giant fern, *Woodwardia chamissoi.*

material, such as huckleberry or large brakes, is used as a wrapper. This material is sometimes sent by express, as it is a little more tender than Christmas berries and must arrive at its destination before becoming dry, but wherever the freight can be relied upon to travel through direct, ship in that way. The bales weigh from 125 to 150 pounds and consist of 112 to 140 bunches to the bale. The annual wholesale value for the Bay Region is approximately $37,000.

HARD FERN OR SWORD FERN, *Polystichum munitum*

This fern is also known as the sword fern, having fronds from one to four feet long. However, the collector seldom cuts the entire frond, usually cutting in lengths of from 18 inches to 30 inches. It is found growing both in the coast mountains and in the Sierras.

Packing.—Packing is carried on in nearly the same way as with the soft fern. There are fewer small tips and the size is more uniform. The lower portions of the fronds are broken off because of their size and weight. The fronds may be bound together with a green withe of California Bay or other pliable material, thus saving the expense of rope, and approximately two dozen are placed in a bunch. This material is also used for set pieces, and the coarser portions are used by the florists in flower baskets to hold the stems of the flowers upright. These fronds bring from three to four dollars a thousand, depending upon the season. The annual wholesale value is approximately $40,000.

WOODWARDIA OR GIANT FERN, *Woodwardia chamissoi*

These ferns grow from three to five feet long and are gracefully curved. They are found growing in groups of from five to twenty fronds along the streams in the Coast Range and in the Sierra Nevada. It is possible to transplant them to the lower altitudes and even in the heat of the interior valleys when given sufficient shade or planted on the north side of a building. The fronds are cut and carefully packed, the season lasting through the entire year, except for a short time in the summer when the growth is soft. The ferns are usually cut to order and sold by the hundred or thousand, the usual wholesale price varying from $2 to $3 a hundred. The old clumps when cut off do not grow sufficiently to furnish new fronds large enough for cutting for at least three years. Care should be taken not to injure the new fronds that are just coming up when cutting the mature ones. The stalk or lower portion of the frond, some eight or twelve inches long, should be cut away so as to reduce the weight for shipment.

This fern is one of the largest and most useful in the florist trade for large extensive decorations, such as weddings and receptions.

OREGON PINE OR DOUGLAS FIR, *Pseudotsuga taxifolia*

This is the most popular material for Christmas trees in the northwest and great quantities of the small trees are shipped to California from Oregon and Washington. The cut branches appearing on the

San Francisco market, however, are gathered in this state and are selected because of their cones, which have a feathered appearance, owing to the presence of small fleur-de-lis-shaped bracts. They are found growing in the Santa Lucia and Santa Cruz ranges, Marin County, and in the Sonoma and Napa valleys northward; also in the Sierra Nevada Mountains south to the San Joaquin River. The branches bearing the cones are rather attractive and are used very

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Fig. 3.—A. Oregon pine or Douglas fir, *Pseudotsuga taxifolia.*
B. Redwood, *Sequoia sempervirens*

extensively at Christmas time. These branches are cut in one- to three-foot lengths, six or seven tied together in a bunch and wholesaled at 50 to 75 cents each.

REDWOOD, *Sequoia sempervirens*

The branches of this close relative of the Giant Redwood are used extensively for Christmas decorations. It is found near the coast, in the Santa Cruz Mountains, on Redwood Peak in the Oakland Hills, and in Marin, Sonoma, Mendocino, Napa, and Humboldt counties, its growth being practically confined to the Northwest Coast belt from Monterey County to the Oregon border. Its flat sprays, spreading as

they do on both sides of the stem, and its shining green leaves make it exceedingly attractive material for wreaths and garlands. The small oval cones, only 5/8 to 1 1/8 inches long and about 7/8 of an inch thick, borne at the ends of the branches, when used in small numbers form attractive decorations for wreaths. The flower buds of the Redwood give it a silvery tipped appearance and make it preferred for the best wreaths. These silver tips are found on the oldest trees and are therefore difficult to obtain. The sprays are cut in two- to four-foot lengths and put into bales of 150 to 300 pounds with the butts out, so that the branches are protected in transit.

Yards of garlands are made from redwood branches during the holiday season. This is done by taking binder twine for the center and wrapping redwood sprays some eight to ten inches in length to the twine by means of number 22 wire. Men are paid about four cents a yard for doing this work, and a day's work ranges from 125 to 300 yards, depending upon the adeptness of the worker. The second growth redwood appearing around the old stumps is especially adapted to this purpose, and is cut in three- to four-foot lengths and packed as described before. Wreaths are contracted for by the wholesalers, the contractor furnishing the form for the wreath and the wire for binding. The usual price for this work is one dollar per dozen wreaths. One man in Sonoma County had a contract for two thousand dozen wreaths this last season, and there are many other individuals producing wreaths which are sold in the cities by solicitors. Frequently orders for the wreaths are solicited some three or four weeks before Christmas by house-to-house canvas. Bales of silver-tipped redwood sell from $2.50 to $3 or more, according to the size and appearance of the bale. This is one of the materials for which there is little demand after the Christmas holidays.

Redwood Burls.—These growths, ranging in diameter from a few inches to one foot or eighteen inches, are sawed from the redwoods and sold as redwood ferns, not because they are in any way related to the ferns, but because of the graceful green, feathery growth which results when the burl is placed cut-side down in a shallow dish of water. This growth is due to the innumerable buds that each contorted mass of wood contains. They may be obtained in pieces up to 6 or 7 feet in diameter, but the florists usually prefer the smaller sizes.

CALIFORNIA BARBERRY OR OREGON GRAPE, *Berberis pinnata* (*Mahonia pinnata*)

Berberis pinnata is closely related to *Berberis aquifolium,* which grows extensively in Oregon and the northern part of the state. It should be well colored for shipment. The apple-green leaves do not make as salable material as those that are dark green and shiny, with tinges of brown, yellow and red in them. Material grown on the northerly slopes of the hills seems to have better color than that grown in other locations. The spiny leaves give it much the appearance of holly, and its high color together with good keeping and shipping qualities, makes it a favorite with the florist. It is used by itself to a considerable extent for restaurant decorations and in baskets and vases of coarse material. It is cut in stems measuring 12 to 24 inches in length, the majority being 14 to 15 inches long, with 24 to 26 stems to the bunch. These are packed in boxes or bales, with the butts out, so as to protect the foliage. This material has its greatest sales during the winter months, and should not be shipped when it is making its new growth. Its wholesale value varies from 30 to 50 cents a bunch, depending upon the coloring and freshness. Only a limited amount of this material is used in California, but a market for it exists in the other states.

IVY, *Vancouveria parviflora*

A low perennial herb with slender, creeping, woody root-stocks. The leaves are attractively heart-shaped, somewhat three-lobed, angular and resembling English Ivy from which it gets its florist's name. It is generally put up in large bunches consisting of six smaller bunches containing approximately 30 stems each, the stems ranging in length from 6 to 12 inches. This material is found growing in the shade of the redwoods in the Santa Cruz Mountains and northward into British Columbia. It can be naturalized as a ground cover in the home garden, and is especially good for shady places. There is very little demand for this material at the present time, as it is used only in the construction of set pieces. The season is approximately from September to March, and at present two men supply the demand for the wholesale flower market in San Francisco. This is material, however, that would be worthy of introduction to other parts of the country, as it is attractive and well adapted for design work. It has good keeping qualities and is sold at a low price, the present wholesale price being fifty cents for 180 to 200 stems.

Fig. 4.—A. California barberry or Oregon grape (*Mahonia Pinnata*) *Berberis pinnata,* as prepared by the wholesaler.
B. Ivy, *Vancouveria parviflora,* as prepared by the wholesaler.

CHRISTMAS BERRY OR TOYON, *Photinia arbutifolia* (*Heteromeles arbutifolia*)

Bright color, especially a shade of red, is the life of Christmas decorations. Consequently the toyon is a favorite material for the November and December holiday trade. The fact that it bears fine clusters of crimson berries from November to January and has bright evergreen leaves, makes it doubly valuable. If a native berried shrub were to be selected that would grow equally well throughout the entire state, one would be inclined to choose the toyon. It is found both north and south, along the streams and cañons throughout the Coast Range

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Fig. 5.—A. Christmas berry or toyon, *Photinia arbutifolia* (*Heteromeles arbutifolia*).
B. Lemon or salal, *Gaultheria shallon,* as prepared by the wholesaler.

and the Sierra Nevada, and in great abundance at middle elevations from Napa to Humboldt County. Highly colored berries come from Amador County. The shrub or small tree grows from 5 to 15 feet high. The appearance of the material handled by the wholesale dealers would indicate that some care is being used in gathering, to avoid destroying the shrub.

Length of Stems.—Short branches measuring 1 to 2 feet and bearing several leaves with a terminal cluster of berries, are stripped from the plant. Cutting would of course be much preferable as far as the future growth of the plant is concerned.

Packing.—The branches are packed in wooden boxes in layers consisting of three rows—two rows with the berries to the outside of the

box, their stem ends butted together and one row placed on top of these butted stems. A loosely constructed box with spaces between the boards is undesirable, as it allows the foliage to dry out. Lining the box with newspaper would undoubtedly protect the quality of the berries by checking evaporation. A cool dark cave would make an ideal place to store the berries while collecting enough to pack and ship. It is advisable to do all that is possible to keep the cut branches cool and well shaded while waiting for packing. Boxes holding at least 300 pounds should be used, so that advantage may be taken of the minimum freight rate, but they should not exceed 600 pounds, as boxes of such weight are difficult to handle. A 350-pound box is about the best weight to ship. Such a box measures on the outside 27 inches by 27 inches by 50 inches, or 28 inches by 32 inches by 46 inches. On the other hand, a box a yard square would hold over 600 pounds. Shipping by freight is advisable.

Charges.—The packer or owner is frequently paid three cents a pound for the net weight of the material, plus a charge for boxes and packing, or he may be paid for the gross weight. The wholesaler pays transportation and distributing charges. Distributing consists of putting the berries in bunches weighing about five pounds each and delivering them to the retailer, or the wholesaler may sell by the case. There are probably between 350 and 500 tons of this berry sold in the state during the holidays, with a wholesale value of between $70,000 and $100,000.

Reasons for Popularity.—The reasons for its popularity are—timely season of maturing its berries, bright color of berries, evergreen leaves, good keeping quality, cheapness, abundance and because it is a good substitute for the holly berry of tradition. The fact that it will withstand shipping long distances is in its favor. Superior material might be grown in any part of the interior, coast, or mountain sections by giving the plants plenty of water and cultivation. It takes from five to eight years to establish good berry-bearing plants from seeds. By cutting each year from alternate rows, an early, annual, superior crop is insured, which would sell at about 10 cents a pound to the trade.

LEMON OR SALAL, *Gaultheria shallon*

This plant, growing one to five feet high, with its large lemon-like leaves from two to four inches long, is an evergreen having a slight spicy aromatic odor when crushed. It is found growing in the Santa Lucia Mountains; Redwood Peak, Alameda County; and Marin

County to Humboldt and northward along the coast. The florist calls it "lemon," and it is known quite commonly along the Pacific Slope as salal. Its value to the florist lies in its cheapness and its long-keeping qualities. He uses it for decorating stores, in set pieces and baskets, and sells large bunches at a low price. Care should be taken not to gather this material when the growth is soft and immature, as it will wilt and look bad upon arrival. About half a ton a day of this material is used in the bay district. One wholesale firm distributes 40 bales a month. The wholesale value of the amount used in a season is approximately $30,000.

Packing.—The material is packed for shipment in bales about 2½ by 2½ by 4 feet in size, weighing from 112 to 200 pounds. It is cut in three-foot lengths and packed by placing the cut ends outward, so that the salable portions are protected inside the bale.

HUCKLEBERRY, *Vaccinium ovatum*

More of this green is used than all others. It is an evergreen shrub growing four to eight feet high, occurring frequently with the second growth redwood. The leaves are small—½ inch to 1¼ inches long. The dark purple berries are edible and are being sold upon the San Francisco market in considerable quantities. It is found growing wherever there are redwoods—in Monterey County, the Berkeley hills, Marin County and northward. July and August are usually the poorest months to gather it, as growth is then soft and immature. The material growing in the vicinity of Oakland is not so vigorous as that in the northern part of the state and consequently does not have the bright shiny leaves of the latter. Its low purchase price, shining green leaves, red-tinged branches, diversity of growth and excellent keeping qualities make it one of the most attractive of the native greens for florists's use and it is used throughout the year. There are approximately 2250 pounds used each day in the bay district. Its value as sold to the florist is approximately $50,000 a year for the bay region alone.

Packing.—The huckleberry is cut into two- to four-foot lengths, packed in 150 to 200-pound bales, butts out, and salable portions placed in the center of the pack. The outside wrapping is frequently of tanbark oak or coarser pieces of huckleberry. The wholesaler repacks in bunches weighing from six to eight pounds for the florist trade.

MISTLETOE, *Phoradendron flavescens*

There are three varieties of mistletoe growing in California—*Phoradendron flavescens, Phoradendron villosum,* and *Phoradendron bolleanum.* The first is the yellow mistletoe of the interior, found growing on the cottonwood and California buckeye. The leaves are circular to oval or narrowly elliptic in outline, 3½ inches long or less, with a distinct stem. The berries are white and in spikes up to 1½

Fig. 6.—Huckleberry, *Vaccinium oratum,* as prepared for and by the wholesaler.

inches in length. As a rule this makes the best shipper and is preferred by the majority of the florists. The second is known as common mistletoe. The leaves are deep green and about one inch long, on short stems. The berries are pinkish and slightly smaller than those on the first named variety. This kind of mistletoe is common in the Coast Range and the Sierra Nevada foothills and is found growing on the oaks. The third variety has no common name. The leaves are narrow with a very short stem and are one-half to one inch long. The berries are pearl-like and about the size of those of the first named. This mistletoe is found in the Coast Range on cypress and juniper.

Packing.—Considerable care should be used in gathering and packing this material for market, as it is very brittle. It is frequently necessary to climb into the tall trees, attach a rope to the mistletoe, cut it from the tree and lower it to the ground, as it will break if allowed to fall. It should not be packed in larger amounts than 80 pounds to the box. Boxes holding 25 to 50 pounds would arrive at their destination in much better condition. It is of little use to ship mistletoe unless it is well-berried and of attractive appearance. Great quantities of this plant are used throughout the United States, but the demand in California is somewhat limited. Before shipping, it is best to send a few branches to the wholesaler, because you may not have the variety which is considered the most attractive.

SUMMARY

The business of gathering California decorative greens is in its infancy, and there is an opportunity of growing the material at a profit, especially in those sections far removed from the places where it grows naturally. Some care anad attention should be given to those areas where the material is now growing and being harvested, to prevent its eradication. Branches of oak trees, pussy-willow, desert holly (*Atriplex hymenelytra*) and madrone have not been mentioned because they are of minor importance to the trade. The madrone should not be gathered as is being done at the present time—by taking great branches and entire tops of trees—and legislation such as exists for the protection of the Christmas redberry is most advisable.

The annual wholesale value of native greens produced in the state is approximately $270,000.

A market should be insured before sending the material to the cities.

There are wholesale dealers who know the limitations of the market.

The demand for ferns, salal and huckleberry is fairly constant, but the amount used by any one florist each day is small.

Contracts may be obtained for making wreaths for the Christmas holidays.

Redwood, cherry and Oregon pine are in demand principally at Christmas time.

LAW RELATING TO THE TOYON OR CHRISTMAS REDBERRY

"An act to add a new section to the Penal Code to be numbered three hundred eighty-four *a*, providing for the protection of the toyon or Christmas redberry and prescribing penalties for violations of the provisions thereof.

(Approved May 14, 1921. In effect July 29, 1921.)

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

Section 1. A new section is hereby added to the Penal Code, to be numbered three hundred eighty-four *a*, and to read as follows:

384*a*. Any person, firm or corporation is guilty of a misdemeanor—

(*a*) Who mutilates or destroys any Toyon or Christmas Redberry tree (*Heteromeles arbutifolia*) growing on public or private land, unless in the case of private land, the owner gives his consent thereto; or

(*b*) Who sells, offers or exposes for sale any Toyon or Christmas Redberry (*Heteromeles arbutifolia*) or any part thereof grown on land in this state; provided, that this paragraph shall not prevent the sale of such Christmas Redberry taken from privately owned land, by, or with the consent in writing of the owner of the land."